Pregnancy and Primary Care

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Disclosures

• I have received funding from the following companies for either advisory boards, attendance at meetings or the delivery of educational meetings:
  • Sanofi
  • Novo Nordisk
  • Eli Lilly
  • Astra Zeneca
  • MSD
  • Boehringer Ingelheim
  • Bayer
  • Abbott
  • NAPP
  • Mylan
  • NB Medical
Background

35,000 women with either pre-existing or gestational diabetes give birth each year in the UK

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-existing type 1</td>
<td>7.5%</td>
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<tr>
<td>Pre-existing type 2</td>
<td>5.0%</td>
</tr>
<tr>
<td>Gestational diabetes</td>
<td>87.5%</td>
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</tbody>
</table>

The number of pregnancies complicated by diabetes increased significantly, by 44% in T1D and 90% in T2D over the 15 year period 1998-2013*

Women with T2D are likely to be managed solely in primary care.

*https://link.springer.com/article/10.1007/s00125-017-4529-3
Challenges

1. Increasing numbers of women with type 1 diabetes are not attending secondary care.

2. Increasing numbers of women of childbearing age have type 2 diabetes.

3. There is an increasing range of newer therapies to treat type 2 diabetes that are contraindicated for use in pregnancy.
Preconception planning...why do we need to consider it?

Unless well managed, women with diabetes face an increased risk of adverse outcomes, including:

- Miscarriage
- Congenital abnormalities
- Macrosomia
- Acceleration in present diabetes complications
- Pre-eclampsia
- Still birth
- Post natal adaptation problems
“It is the responsibility of all professionals involved in the care of women of reproductive age with co-existing medical problems, whatever their professional background and medical specialty, to provide pre- or post-pregnancy advice and contraception”.

Who’s responsibility?
Think!

How many women with diabetes in your practice or on your caseload are of childbearing age?

- Are these women being given pregnancy planning advice at every contact?

- What glycaemic targets are you recommending pre-conceptually?

- What medications are safe to use in pre-conception and pregnancy?
HbA1c relationship to serious neonatal adverse outcomes


The HbA$_{1c}$ target is $<$48 mmol/mol pre-conception if achievable without problematic hypoglycaemia [1].

Women with HbA$_{1c}$ $>$86 mmol/mol should NOT attempt to get pregnant because of the associated risks [1].

• Any reduction towards an HbA$_{1c}$ of 48 mmol/mol is beneficial [3].

References
Pregnancy planning and pre-conception advice

Retinal screening
Retinopathy could develop or accelerate in pregnancy.
• Retinal screening before and during pregnancy is recommended.

Renal assessment
Refer to nephrologist if:
• Serum creatinine is ≥120 µmol/L.
• Urinary albumin:creatinine ratio (ACR) is >30 mg/mmol.
• Estimated glomerular filtration rate (eGFR) is <45 mL/min/1.73 m².
In the specialist pre conception service:

• Advice on injection technique and review of injection sites
• Commence Folic Acid at 5mgs daily, if not already started (continue to end of 12 weeks gestation)
• Monthly HbA1c
• Advice on hypoglycaemia treatment and warning signs (including driving advice)
• Advice on monitoring for ketones and increasing blood glucose monitoring

Diabetes in pregnancy: management of diabetes and its complications from preconception to the postnatal period
nice.org.uk/guidance/ng3
Challenges for the mother during the pregnancy

• Challenges of sudden glycaemic improvement
  • Retinopathy
  • Nephropathy

• Pre eclampsia
• Ketosis
• Loss of hypo warnings
• Many clinic attendances
Why we need to encourage attendance to regular retinal screening

• *Pre Pregnancy advice*.... defer rapid optimisation of blood glucose control until after retinal assessment and treatment have been completed. [2008]

• *Ante natal advice*...retinopathy should not be considered a contraindication to rapid optimisation of blood glucose control in women who present with a high HbA1c [2008]
First contact with ante natal service at 5 weeks gestation

- HbA1c graph

![HbA1c Graph](image)
Result...

- During pregnancy with rapid improvement of HbA1c developed macular oedema
- Pre-eclampsia
- Emergency caesarean section performed at 35/40
- Bilateral vitreous haemorrhages - temporary blindness
- Post natal urgent bilateral vitrectomy performed some sight restored
Adjusting medication during the pregnancy
Only 46% of women with T1D and 23% of women with T2D were taking 5mg folic acid prior to pregnancy.

Only 22.5% of women with T2D were taking the correct dose: Prescription only 5mgs Folic Acid

Ideally at least 3 months prior to conception and up to the end of the 12th week of pregnancy.
Medication review

Teratogenic medications often used in diabetes:

• Angiotensin-converting enzyme (ACE) inhibitors.
• Angiotensin receptor blockers (ARBs).
• Statins.

STOP ALL OF THESE PRIOR TO CONCEPTION.
Important considerations

STOP HAZARDOUS MEDICATIONS

• 2.9% of women with T1D and 8.6% of women with T2D were taking either statins or an ACE inhibitor/ARB or both when they became pregnant.

HbA1c TARGET <48mmol/L

• Only 16% of women with T1D and 38% of women with T2D had a first trimester HbA1c below 48 mmol/mol.

Medication review

• Metformin is the only oral antidiabetes medication recommended by NICE during pre-conception and pregnancy (off-licence but strong evidence).
  ➢ **Stop** all other oral/glucagon-like peptide-1 (GLP-1)-based antidiabetes medications. Some of these will need to be stopped 3 months prior to conception
What we need to do during the postpartum period
Postnatal care

Postnatally, women with pre-existing diabetes are at an increased risk of hypoglycaemia, especially if breastfeeding.

Therefore:

• If pre-existing insulin-treated diabetes: closely observe SMBG readings and adjust insulin doses accordingly. Reduced doses of at least 20% are likely to be required.
• Advise a meal or snack before or during breastfeeding.
• Metformin and glibenclamide can be used if breastfeeding, but no other diabetes medications, including those stopped in pre-pregnancy.
• If gestational diabetes: **stop all** blood glucose-lowering therapy immediately after birth (unless persistent hyperglycaemia).
Post natal care for women who have had gestational diabetes

• Primary care should be informed by the specialist team of every diagnosis of gestational diabetes
• Post natal test for diabetes at 6-13 weeks (fasting plasma glucose or HbA1c)
• Annual HbA1c if post natal test for diabetes negative
• Life style advice
• Advice regarding subsequent pregnancies

Diabetes in pregnancy: management of diabetes and its complications from preconception to the postnatal period nice.org.uk/guidance/ng3
Postnatal care

• Encourage breastfeeding*

• Can reduce risk of progression to type 2 diabetes in women with gestational diabetes.

• Can reduce risk of progression to type 2 diabetes in later life for the baby.

In summary

• Consider the growing number of women with type 2 diabetes of child bearing age and the medications prescribed

• Consider that not all women of child bearing age with pre existing type 1 diabetes are looked after in secondary care clinics

• Consider the rapidly growing population of women diagnosed with gestational diabetes and the future care they need
Thank you for listening